

1 Removal of iron and manganese from aqueous solutions
Chem.) 21, 1283-92 (1948). Coagulation in natural
compds. at pH 8.6-9.0 or by filtration through org. Na
permutes. In the 1st process, the hardness of the water
is raised owing to the use of lime. In the permute
process, 1 kg removes 7.6 g Mn. The rate of absorption
of the Mn^{2+} and Ca^{2+} ions by Na permute is high,
permitting filtration of 40-50 vols./hr./vol. permute.
The mass can be regenerated repeatedly with the aid of a
5-10% NaCl soln. In the simultaneous presence of Ca^{2+}
and Mn^{2+} , the units absorbed are proportional to the
concn. of these ions in the soln. $FeCl_3$ is absorbed by the
permute only in insignificant units. N. Thom

Catalytic hydrogenation of cyclic compounds containing carbonyl groups. I. T. I. Yekhotko. *J. Gen. Chem.* 2 (U.S. S. R.) 11, 103-102 (1941).—The work was done with a view to the hydrogenation of camphor and fenchone at ordinary temps. and pressures and to the detn. of the strength of the carbonyl bonds in these compds. Cyclohexanone (0.8 g.) in 60 cc. AcOH was hydrogenated at room temp. and pressure in the presence of 0.6 g. Pt black. In 4 hrs. 97.4% absorption occurred, giving an av. K_1 up to 75% H absorption, of 0.5000. Use of only 30 cc. AcOH gave a similar K of 0.4080. Both cyclohexanol and some cyclohexyl acetate were isolated. Repetition of the 1st expt., using 0.3 g. Pt black and AcOH contg. 8.92% HCl, gave an av. K , up to 73.8% H absorption, of 0.4230. Fenchone (0.1 g. mol.) in AcOH contg. 8.92% HCl (total 30 cc.) was hydrogenated in the presence of 2 g. Pt black. K , up to 69% H absorption, was 0.069. For camphor, under the same conditions, K is 0.0830. The hydrogenation product of fenchone was fenchylalc. (isolated as acetate, b.p. 207-11°) as well as a no. of unidentified materials. Similar treatment of camphor yielded some camphane, and a no. of unidentified products. In the absence of HCl, fenchone and camphor practically do not hydrogenate. II. *Ibid.* 103-7.—The present paper deals with the hydrogenation, in the presence of Pt black in AcOH contg. 5-6% dry HCl, of a no. of cyclic keto compds.: menthone, tetrahydrocarvone (carvomenthone) (I), carvone and pulegone. Carvone (I) (30 g.) in 60 cc. abs. EtOH was hydrogenated in the presence of 0.95 g. Pt black; in 23.5 hrs. 99.9% of the theoretical amt. of H was absorbed. Mean K for 46% absorption, 0.832. Using 30 cc. EtOH and 0.6 g. Pt black gave K 0.381, while using 15

cc. EtOH and 0.6 g. Pt black gave K 0.281. Comparative hydrogenation of menthone and I in AcOH contg. 5.92% dry HCl gave mean K 's for the former about 20% lower than those for the latter. I under these conditions gives about 60% carvomenthyl acetate, some low-boiling product and carvomenthol. Menthol under these conditions gives approx. 60% of methyl acetate. I (0.1 mol.) in AcOH contg. 5.92% HCl hydrogenated in the presence of 0.3 g. Pt black, gave a mean K for 63% absorption of 0.180. Approx. 11 g. of carvomenthyl acetate was obtained in 60 cc. vol. and using 0.5 g. Pt black, gave a mean K for 80% absorption of 0.104, while the similar K for menthone is 0.352.

G. M. Kozulapoff

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

CH

7

The application of copper alcohohates of polyatomic alcohols in the detection and determination of reducing sugars. V. M. Platkovskaya and T. I. Verkhotsko. J. Applied Chem. (U. S. S. R.) 9, 177-81 (in English 181) (1956). Alk. Cu glycerolate or mannitolate solns. can replace Fehling soln. for the detection and detn. of reducing sugars. Reagents: (1) 18.4 g. glycerol and 40 g. NaOH made up to 250 cc. with H₂O; (2) 18.6 g. mannitol and 40 g. NaOH made up to 250 cc., (3) 5% CuSO₄·5H₂O.

ASR SER - METALLURGICAL LITERATURE CLASSIFICATION

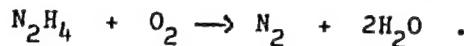
S/080/63/036/001/020/026
D204/D307

AUTHOR: Vekhotko, T.I.

TITLE: The simultaneous desalting and deoxygenation of water with hydrazine cations and OH-anionites

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963,
195 - 203

TEXT: The demineralization of water with hydrazine salts was studied by analogy to the known desalting with the compounds of ammonia. Cationite KY - 2 (KU - 2) and anionite ЭД3-10П (EDE-10P) were used. It was confirmed that treatment with $N_2H_5^+$ and OH^- allows full desalting to be achieved. Hydrazine hydrate passes into solution and, at a sufficiently high temperature, deoxygenates the water by the reaction



The disadvantage of this method lies in the fact that the N_2H_4 ,
Card 1/2

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D204/D307

The simultaneous desalting ...

whose concentration depends on the original salt content, may be left in solution after complete deoxygenation. The working exchange capacity of KU-2 for $N_2H_5^+$ has been found to be 1000-1100 mg-eqts/l of the anionite, and those of EDE-10P for Cl^- and $SO_4^{=}$ 700-800 mg-eqts/l of the ionite. The cationite was regenerated with hydrazine chloride, sulfate, bisulfate, and carbonate, and the anionite with aq. NaOH. It was however shown that both ionites may be regenerated simultaneously with a solution of $(N_2H_5)_2CO_3$, passed through the 2 resins in either direction, or with N_2H_5OH ; passed in the direction anionite — cationite. Despite the relatively high costs of hydrazine derivatives, the regenerating solutions may be re-used or the losses may be reduced by precipitation of hydrazine from the regenerating solutions as the bisulfate. Separate regeneration (KU-2 with 5-7 % of N_2H_5Cl and EDE-10P with 5-7 % NaOH) is however preferable since it gives rise to better desalting. There are 7 figures and 1 table.

SUBMITTED: July 30, 1961

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

VEKHOTKO, T.I.

Simultaneous demineralization and deoxygenation of water by means
of hydrazine cations and OH anion exchangers. Zhur.prikl.khim. 36
no.1:195-203 Ja '63. (MIRA 16:5)
(Saline waters--Demineralization) (Ion exchange)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

VEKHOTKO, T.I.

Simultaneous softening and deoxidation of water by means of
hydrazine cation exchange. Zhur.prikl.khim. 35 no.7:1633-
1636 Jl '62. (MIRA 15:8)
(Water—Softening) (Ion exchange)

S/080/62/035/007/013/013
D202/D307

AUTHOR: Vekhotko, T.I.

TITLE: A simultaneous softening and deoxygenation of water
by means of hydrazine cationization

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 7, 1962,
1633-1636

TEXT: The author presents the results of an investigation
on the use of hydrazinium salts $[(N_2H_5)_2CO_3]$, NaH_5Cl and $(N_2H_5)_2SO_4$
for the regeneration of the industrial cationite KY-2 (KU-2); $N_2H_5^+$
reacts with different ions adsorbed by the KU-2 in equivalent
amounts; the exchange capacity of KU-2 towards $N_2H_5^+$ ions being
1100-1200 mg eq/l of the swollen cationite. Hydrazine hydroxide is
ineffective owing to its very low dissociation constant. It was
found that when water of low hardness and salt content but with a
high oxygen content (up to 10 mg/l) is to be purified, then only
its hardness and salt content are eliminated in a single filtration

Card 1/2

A simultaneous softening ...

S/080/062/035/007/013/013
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at room temperature. At 85°C full softening and deoxygenation occur simultaneously, the hydrazime salt in the filter acting as a redox-ionite. There are 2 tables.

SUBMITTED: July 30, 1961

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Card 2/2

VEKHOV, A.G.,

Some problems in the expansion of the clothing industry. Shvein.-
prom. no.3:5-8 My-Je '62. (MIRA 15:6)
(Clothing industry)

VEKHOV, G., agronom.

Storage of sunflower seed. Muk.-elev.prom 22 no.9:12-13 S '56.
(MELA 10:8)
(Sunflower seed--Storage)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

VEKHOV, G., agronom

Storing corn. Muk.-elev.prom.21 no.8:10-11 J1 [Ag] '55. (MLRA 8:12)
(Corn (Maize)) --Storage)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

VEKHOV, G., agronom.

Diseases of ears of corn and their prevention. Muk.-elev.prom. 21
no.1:27-28 Ja '55. (MLRA 8:5)
(Corn (Maize)--Diseases and pests)

VEKHOV, G.I.

Tractor industry in 1961-1962. Trakt. i sel'khozmash. 31 no.
7:1-2 Jl '61. (MIRA 14:6)

1. Glavnnyy spetsialist Gosplana SSSR.
(Tractor industry)

• 1000000000

Zharkin [Jasmine]. Moscow, "Mosk. rabochii", 1952. 56 p.

80: Monthly List of Persian Acquisitions, Vol. 7, No. 4, July 1922.

VYKHOV, N., professor, doktor sel'skokhozyaystvennykh nauk.

Forested steppe plant breeding experimental station is participating
in the All-Union Agricultural Exhibition. Zhil.-kom.khoz. 4 no.6:12-
20 '54. (MIRA 7:10)

(Moscow--Agricultural exhibitions) (Agricultural exhibitions--
Moscow) (Agricultural experiment stations)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

VEKHOV, N. K., ed.

Decorative gardening; a short dictionary-handbook. Moskva, Gos. izd-vo sel'khoz. lit-
ry, 1949. 438 p. (51-17851)

SB45.D4

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

VEKHOV, N.K. [deceased]

Methods of introducing and acclimatizing arborescent plants.
Trudy Bot.inst.Ser. 6 no.5:93-106 '57. (MIRA 10:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut agrolesomelioratsii.
(Trees) (Plant introduction)

*... CLASSIFIED
1984*

VEKHOV, Nikolay Kuz'mich, prof. [deceased]; VEKHOV, Vladimir
Nikolayevich; NERONOVA, M.D., red.; LELYUKHIN, A.A., tekhn.
red.

[Coniferous species of the Forest-Steppe Station; results
of their introduction] Khvoynye porody Lesostepnoi stantsii;
itogi introduktsii. Moskva, Izd-vo M-va kommun.khoz.RSFSR,
1962. 147 p. (MIRA 16:4)

(Volynskiy District--Coniferae)
(Volynskiy District--Plant introduction)

VEKHOV, N. K.

27838. Vekhov, N. K. Preobrazoyushcheye vliyaniye nasazhdennig dreresnykh
porod na pochvu v lesostepi les. i step', 1949, No. 1. s. 8-17

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

USSR/Cultivated Plants - Introduction and Acclimatization.

H-2

Abs Jour : Ref Zhar - Biol., No 9, 1953, 39155

Author : Vekhov, N.K.

Inst : Botanical Institute AS USSR

Title : Methods of Tree Introduction and Acclimatization.

Orig Pub : Tr. Botan. in-ta, AN USSR, 1957, ser. 6, vyp. 5, 93-106.

Abstract : It is noted that the introduction of tree species must always be accompanied by selection. A formula for determining the freezing coefficient C, taking errors into consideration, is recommended. $C = \frac{(100-b)a + v}{100}$, where a - is the freezing coefficient of the preserved trees (in %), v - is the decrease of plants (in %) from the original number of plants during the years of observation. The freezing coefficient of the preserved trees - a is determined, according to the formula $= 1/\dots$

Card 1/2

USSR/Cultivated Plants - Introduction and Acclimatization.

H-2

Abs Jour : R.F Zaur - Biol., N, 9, 1958, 39155

(for one year observation), where l - is the percentage ratio of the average length of the frozen parts of shoots for a given year, and h - is the average length of the shoots for the preceding year. It is recommended for introduction purposes that seeds from trees be utilized which have already passed through one or several consecutive acclimatization stages under conditions as near to those prevailing in the new place of introduction as possible. Bearing in mind that the winter resistance of tree species increases with age, it is recommended that species be protected from the frost in the first years of their growth, as their resistance is very low during that period. The great importance of creating conditions favorable to the development of mycorrhizas is noted. Examples of successful utilization of heterosis are given. -- I.K. Fortunatov

Card 2/2

- 8 -

VEKHOV, N. K.

27797. NIKIFOROV, S. I. --Universal'naya selektsiownaya terka. Seleksiya i
semenovodstvo, 1949, No. 9, C. 49-51. VEKHOV, N. K. Preobrazuyushcheye vliyanije
nasazhdennykh drevesnykh porod na pochvu v lesostepi. -- CM. 27838. ZAGGEL'EV, A.
Osnovnyye zadachi i puti organizatsii vodosnabzheniya zhivotnovodstva v kazakhstane.
-- Sm. 27858.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

VEKHOV, N.K.

22386-Vekhov, N.K. K Metodike Inventarizatsii Rasteniy I Zapisu Nablyudeniy V
Dendrologicheskikh Sadakh Byulleten' Grav. Botan Sada. Vyp. 2, 1949, S. 78-88

SO: Letopis' Letopis' No. 30 1949

VEKHOV, N.K.

Effect of forest plantations on the soil, soil cover, and on
reforestation in the forest-steppe zone. Biul.Glav.bot.sada
(MIRA 8:2)
no.19:3-11 '54.

1. Lesostepnaya selektsionnaya optytnaya stantsiya dekorativ-
nykh kul'tur.
(Forest ecology)(Forest soils)

VSEKHOV, Nikolai Kuz'mich, doktor s.-kh. nauk; PANKOV, V.I., redaktor;
MIRONOVA, M.D., redaktor izdatel'stva; KONYASHINA, A., tekhnicheskiy
redaktor.

[Hedges and borders] Zhivye izgorodi i bordury. Moskva, Izd-vo
M-va kommun.khos. RFSR, 1957. 125 p. (MIRA 10:11)
(Hedges)

VEKHOV, N. K.

22386. Vekhov, N. K. K METODIKE INVENTARIZATSII RASTENIY I ZAPISI NAELYUDENIY V
DENDROLOGICHESKIH SADAKH. BYULLEHEN' GRAV. BOTAN. SADA, VYP. 2, 1949, S. 72-82

SO: LETOPIS' No. 30, 1949

VEKHOV, N. K.

Afforestation

Methods of setting out mother seed plantations. Les i step, 4 No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

VEKHOV, N.K.

Method of laying out an arboretum. Biul.Glav.bot.sada no.16:13-19 '53.
(MLRA 7:4)

1. Lesostepnaya selektsionnaya opytnaya stantsiya dekorativnykh kul'tur.
(Arboreta)

VIEKHOV, N.K., professor.

[Lilacs] Sireni. Moskva, Izd-vo Ministerstva komunal'nogo khoziaistva
RSFSR, 1953. 149 p.
(MIRA 6:12)
(Lilacs)

NAZAREVSKIY, S.I.; MAKAROV, S.N.; PILIPENKO, F.S.; GERASIMOV, M.V.; IL'INSKAYA, M.L.; VEKSLER, A.I.,[deceased]; VASIL'YEV, I.M.; IL'INA, N.V.; SOKOLOV, S.Ya.; LOZINA-LOZINSKAYA, A.S.; SAAKOV, S.G.; ZALESSKIY, D.M.; AVHRIE, N.A.; IVANOV, M.I.; PRIKLADOV, N.V.; SOBOLEVSKAYA, K.A.; SALAMATOV, M.N.; MALINOVSKIY, P.I.; LUCHNIK, A.I.; KRAVCHENKO, O.A.; VEKHOV, N.K.; GROZDOV, B.V.; MASHKIN, S.; BOSSE, G.G.; PALIN, P.S.; (g. Shuya, Ivanovskoy oblasti); MATUKHIN; ZATVARNITSKIY, G.F.; GRACHEV, N.G.; CHERKASOV, M.I.; KIRKOPULO, Ye.N.; LEVITSKAYA, A.M.; GRISHKO, N.N.; LIKHVAR', D.F.; VIL'CHINSKIY, N.M.; LYPA, A.L.; OREKHOV, M.V.; SHCHERBINA, A.A.; TSYGANKOVA, V.Z.; BARANOVSKIY, A.L.; GEORGIYEVSKIY, S.D.; STEPUNIN, G.A.; OZOLIN, E.P.; LUKAYTENE, M.K.; KOS, Yu.I.; VAIL'YEV, A.V.; RUKHADZE, P.Ye.; VASHADZE, V.N.; SHANIDZE, V.M.; MANDZHAVIDZE, D.V.; KORKESHKO, A.L.; KOLESNIKOV, A.I.,(g. Sochi); SERGEYEV, L.I.; VOLOSHIN, M.P.; RYBIN, V.A.; IVANOVA, B.I.; RIABOVA, T.I.; GAREYEV, E.Z.; RUSANOV, F.N.; BOCHANTSEVA, Z.P.; BLINOVSKIY, K.V.; KLYSHEV, L.K.; MUSHEYAN, A.M.; LEONOV, L.M.

Talks given by participants in the meeting. Biul.Glav.bot.sada no.15:
(MLRA 9:1)
85-182 '53.

1. Glavnyy botanicheskiy sad Akademii nauk SSSR (for Makarov,Pilipenko, Gerasimov, Il'inskaya, Veksler); 2. Akademiya komunal'nogo khozyaystva imeni K.D. Pamfilova for Vasil'yev); 3. Vsesoyuznaya sel'skokhozyaystvennaya vystavka (for Il'ina); 4. Botanicheskiy sad Botanicheskogo instituta imeni V.L.Komarova Akademii nauk SSSR (for Sokolov, Lozina-Lozinskaya, Saakov); 5. Botanicheskiy sad Leningradskogo
(continued on next card)

NAZAREVSKIY, S.L.---(continued) Card 2.

gosudarstvennogo ordena Lenina universiteta (for Zalesskiy); 6. Pol-yarno-Al'piyskiy botanicheskiy sad Kol'skogo filiala imeni S.M. Kirova Akademii nauk SSSR (for Avrorin); 7. Botanicheskiy sak pri Tomskom gosudarstvennom universitete (for Ivanov); 8. Botanicheskiy sad pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva (for Prik-ladov); 9. TSentral'nyy Sibirskiy botanicheskiy sad Zapadno-Sibirska-
go filiala Akademii nauk SSSR (for Salamatov, Sobolevskaya); 10. Bo-
tanicheskiy sad Irkutsko gosudarstvennogo universiteta imeni A.A.
Zhданова (for Malinovskiy); 11. Altayskaya plodovo-yagodnaya opty-
naya stantsiya (for Luchnik); 12. Bashkirskiy botanicheskiy sad (for
Kravchenko); 13. Lesostepnaya selektsionnaya optynaya stantsiya deko-
rativnykh kul'tur tresta Goszelenkhoz Ministerstva kommunal'nogo kho-
zyaystva RSFSR (for Vekhov); 14. Bryanskij lesokhozyaystvennyy insti-
tut (for Grozdov); 15. Botanicheskiy sad pri Voronezhskom gosudar-
stvennom universitete (for Mashkin); 16. Orehovo-Zuyevskiy pedago-
gicheskiy institut (for Bosse); 17. Botanicheskiy sad pri Rostovskom
gosudarstvennom universitete imeni V.M. Molotova (for Matukhin); 18.
Botanicheskiy sad Kuybyshevskogo gorodckogo otstala narodnogo obrazo-
vaniya (for Zatvarnitskiy); 19. Zoobotanicheskiy sad pri Kazanskem
universitete (for Grachev); 20. Gosudarstvennyy respublikanskiy
proektnyy institut "Giprokommunstroy" (for Cherkasov); 21. Botani-
cheskiy sad Odesskogo gosudarstvennogo universiteta imeni I.I. Mechni-
kova (for Kirkopulo); 22. Botanicheskiy sad pri Dnepropetrovskom
gosudarstvennom universitete (for Levitskaya); 23. Botanicheskiy sad
(continued on next card)

NAZAREVSKIY, S.L.----(continued) Card 3.

Akademii nauk USSR (for Grishko, Likhvar', Vil'chinskiy); 24. Kiyevskiy sel'skokhozyaystvennyy institut (for Lypa); 25. Botanicheskiy sad Chernovitskogo gosudarstvennogo universiteta (for Orekhov); 26. Botanicheskiy sad pri L'vovskom gosudarstvennom universitete imeni Iv. Franko (for Shcherbina); 27. Botanicheskiy sad Khar'kovskogo gosudarstvennogo universiteta imeni A.M. Gor'kogo (for TSyagan-kova); 28. Botanicheskiy sad Zhitomirskogo sel'skokhozyaystvennogo instituta (for Baranovskiy); 29. Botanicheskiy sad Akademii nauk Belorusskoy SSR (for Georgiyevskiy); 30. Institut biologii Akademii nauk Belorusskoy SSR (for Stepunin); 31. Botanicheskiy sad Akademii Litovskoy SSR (for Lukaytene); 32. Botanicheskiy sad Latviyskogo gosudarstvennogo universiteta (for Ozolin); 33. Kabardinskiy krayevedcheskiy botanicheskiy sad (for Kos); 34. Sukhumskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Vasill'yev, Rukhadze); 35. Batumskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Shanidze); 36. Tbilisskiy botanicheskiy sad Akademii nauk Gruzinskoy SSR (for Mandzhavidze); 37. Sochinskiy park Dendrariy (for Korkeshko); 38. Gosudarstvennyy Nikitskiy botanicheskiy sad imeni V.M. Molotova (for Sergeyev, Voloshin); 39. Krymskiy filial Akademii nauk SSSR (for Rybin); 40. Botanicheskiy sad Moldavskogo filiala Akademii nauk SSSR (for Ivanova); 41. Botanicheskiy sad Botanicheskogo instituta Akademii nauk Tadzhikskoy SSR (for Ryabova); 42. Botanicheskiy sad Kirgizskogo filiala Akademii nauk SSSR (for Gareyev); 43. Botanicheskiy (continued on next card)

NAZAREVSKIY, S.L.----(continued) Card 4.

sad Akademii nauk Usbekskoy SSR (for Rusanov, Bochantseva); 44.
Botanicheskiy sad Akademii nauk Turkmeneskoy SSR (for Blinovskiy);
45. Respublikanskiy sad Akademii nauk Kazakhskoy SSR (for Klyshev,
Mushegyan).

(Botanical gardens)

VEKHOV, P., inzh.

"Method of limited use ("Nomograms for computing quantities of earthwork in constructing highways" by N.N.Kondakov. Reviewed by P.Vekhov). Avt.dor. 22 no.12:29 D '59.

(MIPA 13:4)

(Road construction) (Earthwork--Tables, Calculations, etc.)
(Kondakov, N.N.)

VEKHOV, P. A.

"Ordinary Fertilization of Grain Crops in Rich Podzolic Soils."
Sub 1 Mar 51, All-Union Sci Res Inst of Fertilizers, Agricultural Engineering and Soil Science imeni K. K. Gdroyets.

Dissertations presented for science and engineering degrees in
Moscow during 1951.

SO: Sum. No. 480, 9 May 55

VEKHOV, P.A.

Long-range field tests with manure and mineral fertilizers, with
lime and phosphorite application to soils. [Trudy] NIUIF no.164:
70-71 '59. (MIRA 15:5)
(Fertilizers and manures)

VEKHOV, P.P.; GOL'DBERG, M.P.

Use of the partial orthogonalization method in solving systems of
linear equations. Nauch. trudy TashGU no.208. Mat. nauki. no.23:
50-60 '62. (MIRA 16:8)

(Linear equations)

VEKHOV, P.V., inzh.

Computing earth quantities in constructing road beds. Avt.
dor. 23 no.2:23-25 I '60. (MIRA 13:5)
(Road construction)
(Earthwork--Tables, calculations, etc.)

VEKHOV, Petr Vasil'yevich; KOMENDANT, K.P., red.

[Calculating the capacity of earthen structures] Vychislennie ob"emov zemlianykh sooruzhenii. Kiev, "Eduvel'-nyk," 1964. 76 p. (MIRA 17:6)

VEKHOV, Petr Vasil'yevich, inzh.; SASONKO, L.V., inzh., nauchn.
red.

[Design equations for wavy and folding profiles] Raschet-
nye formuly dlia volnistykh i skladchatykh profilei. Mo-
skva, Stroizdat, 1964. 42 p. (MIRA 18:1)

DOBROVOL'SKIY, N., polkovnik; VEKHOV, S., inzh.-podpolkovnik, kand. khimicheskikh nauk

Radioactive contamination and the decontamination of water. Tekh. (MIRA 17:9)
i vooruzh. no.4:47-50 Ap '64.

VEKHOV, Sergey Pavlovich; SOKOLOVA, Nataliya Filippovna; NEYMAN,
M.I., red.

[How to purify and decontaminate water by the simplest
means] Kak ochistit' i obezzarazit' vodu s pomoshch'iu
prosteishikh sredstv. Moskva, Meditsina, 1965. 23 p.
(MIRA 18:10)

VEKHOV, V. A.

27155. VEKHOV, V. A. Vliyaniye izmeneniya temperaturnogo rezhima na dinamiku vydeleniya letuchikh veshchestv. Voprosy koksovaniya. Izvestiya akad. Nauk SSSR, otd-niye tekhn.nauk, 1949, No.8, s. 1209-18.

So: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949.

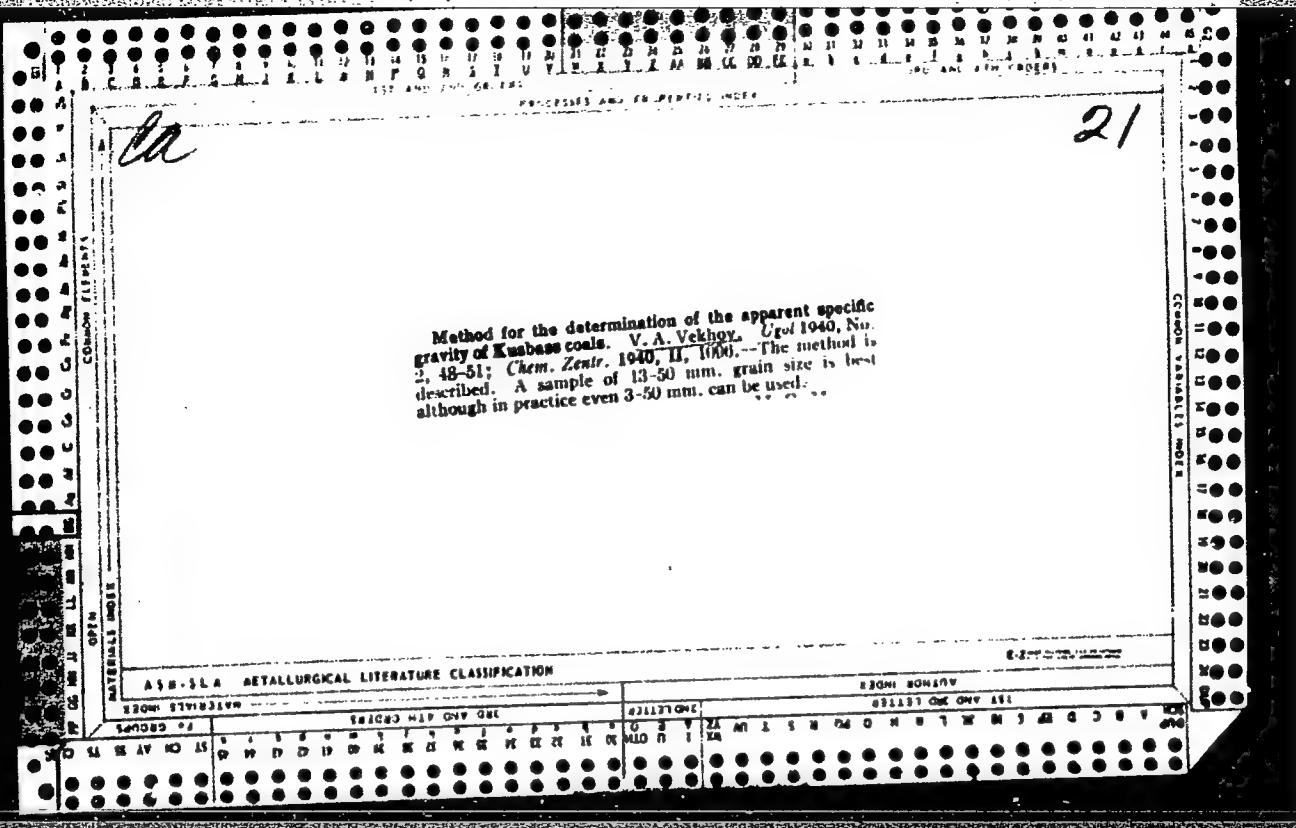
Plastometric investigation of coking properties of the Kuznetsk coal. V. A. Vekhov. *Khim. Prom-stvo Ispoln.* 8, 110-120 (1937). Characteristics of plastometric devices and coking properties of coals from 6 deposits of the Kuznetsk basin are given. Data are tabulated and the coals are classified. Seven references. A. A. P.

APPENDIX A: METALLURGICAL LITERATURE CLASSIFICATION

卷之三

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"



*Chem A**21*

Dynamics of the evolution of volatile matter and the fracturing of coke from Kuznets coal. V. A. Vekhov. *Izdat. Akad. Nauk S.S.R., Otdel. Tekh. Nauk* 1949, 258-68.
Dynamics of evolution of volatile matter was studied by the Grey-King method, modified to include a special receiver for tar and water with partitions to measure yield of products as a function of time. Tests were made with most representative Kuznets coals in 340-400° and hardening at 450-460°. In going from gas coal to lean coal, the yield of solid residue (semicoke) increases while that of total gas, moisture, and especially tar decreases. Sepn. of volatiles was observed at 180-190°. In going from gas coal to lean coal, intensity of gas evolution decreases gradually while that of liquid compds. decreases sharply. Sepn. of liquid compds. starts during the plastic state of coal and ends when semicoke is reached. Up to 150°, sepn. of volatiles was not significant (only outer and inner water was sepd.). During the pre-plastic period (up to 340-400°), sepn. of pyrogenetic water and gaseous products was not great. During the plastic period, sepn. of gaseous products was intense at first and decreased toward the end; sepn. of pyrogenetic water continued and that of liquid products commenced. Sepn. of gaseous and liquid products was most intense during the semicoke period; during the coke period, evolution of gaseous products decreased gradually. Shrinkage processes taking place in the deeper layers of semicoke cause an overstrain of forces which results in the formation of longitudinal cracks at a certain distance from the plastic layer; during later stages, these cracks develop along the width and length of the plastic layer. As the width of the semicoke and coke layer increases, transverse cracks are formed. Kuznets gas coals can be mixed with others to give coking mixts. with a low yield of tar; this is to be tested on a coin scale.

B. Z. Kamich

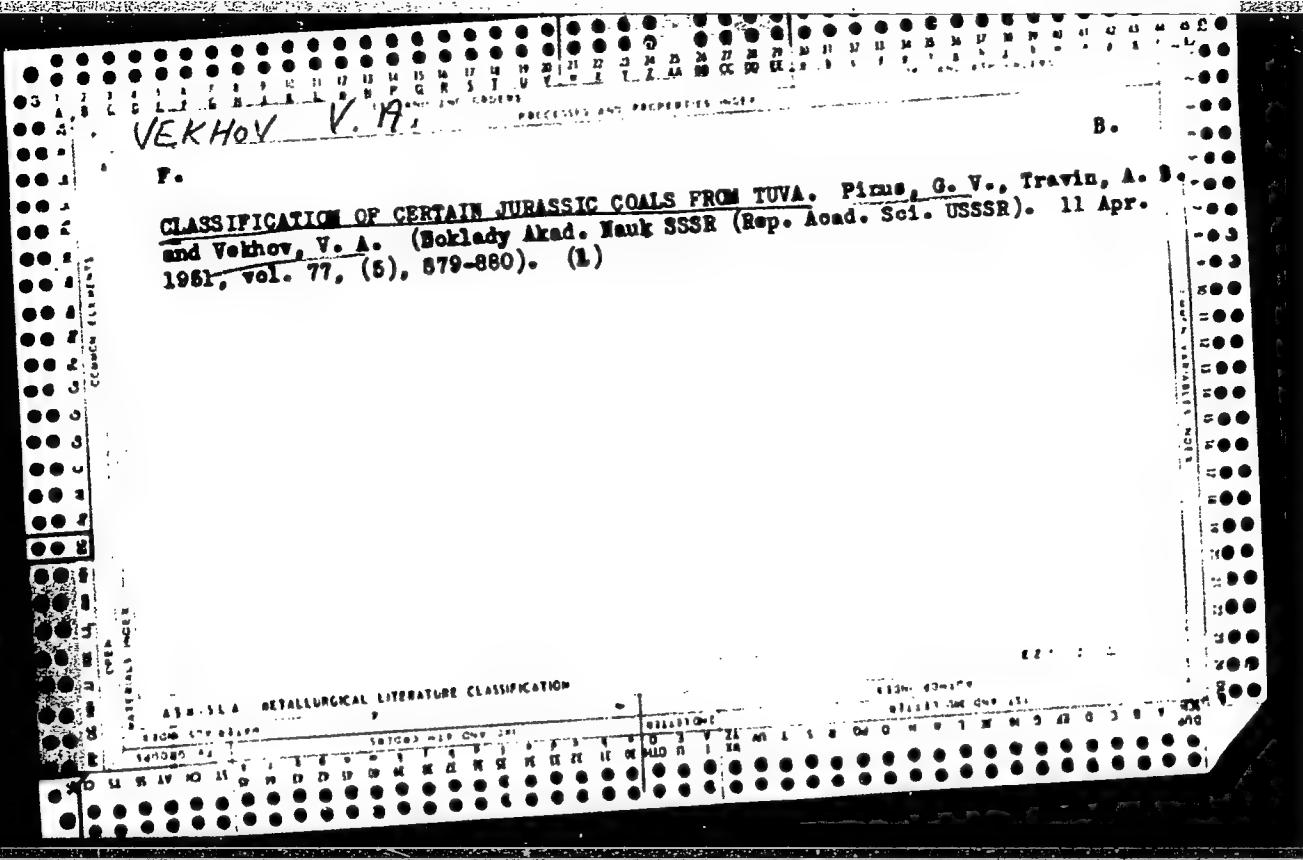
*Chem. Metal
Inst., West Siberian Affil, A5 USSR
1951*

CB

21

Effect of temperature change on the dynamics of evolution of volatile matter. V. A. Vekhov, *Izvest. Akad. Nauk S.S.R., Otdel. Tekh. Nauk* 1949, 1209-18. —Distr. of long-flame, gas, bituminous, and coking coals was conducted in a Mo glass tube, with sep. detn. of gas, tar, and water. Rise in temp. was 0.25°, 2.5°, and 25°/min. With rising rate of heating of clinkering coals, the liquid products of their decompr. showed the least breakdown up to higher temps. This favored the softening of the individual coal particles and their union into a uniform mass during the plastic condition. However, the rising rate of heating intensified the segm. of liquid volatile products during the semi-coking stage and this favored the formation of cracks in the coke. Coking of charges with a large admixt. of soft coals should be conducted under moderate conditions of heating.
B. Z. Kamich

1951



VEKHOV, V.A.; GARANZHA, L.P.; NEKRASOVA, Z.D.; KULISH, N.F.

Some regularities of the changes in the solubility of chlorolignin
in alkalies. Gidroliz. i lesokhim.prom. 17 no.2:16-17 '64.
(MIRA 17:4)

1. Dnepropetrovskiy metallurgicheskiy institut.

VERHOV, V. A.

Dissertation: "Metallurgical Coke From Gassed Coal of the Kuznets Basin." Dr Tech
Sci, Inst of Mineral Fuels, Acad Sci USSR, 18 May 54. Vechernaya Moskva, Moscow, 7
May 54.

SO: SUM 284, 26 Nov 1954

ACCESSION NR: AP4019484

S/0078/64/009/003/0530/0533

AUTHORS: Vekhov, V. A.; Dudnik, Ye. P.; Marin, K. G.

TITLE: Production of silicon dioxide by hydrolysis of tetraethoxysilane

SOURCE: Zhurnal neorg. khimii, v. 9, no. 3, 1964, 530-533

TOPIC TAGS: tetraethoxysilane, hydrolysis, silicon dioxide, production, hydrolysis catalyst, reaction rate, HCl catalyst, ammonia catalyst

ABSTRACT: The hydrolysis of tetraethoxysilane in aqueous solution in the presence of a catalyst that is easily separable from the product, and the reaction rates and yields of SiO_2 were investigated. On hydrolyzing with a 1% HCl solution, a 1:1 tetraethoxysilane:water ratio is optimum. Increasing HCl concentration from 0.0097 to 3.65% increases the time required to complete hydrolysis. A satisfactory white SiO_2 was obtained with 0.186% HCl in 8 minutes; therefore 0.2% or stronger HCl is suggested. With ammonia, a 1:1 reactant ratio is also optimum. Reaction temperature is 30-40°C to prevent excessive volatilization of the ammonia. With 0.94% ammonia, 98% hydrolysis was obtained in 55 minutes. With lesser concentrations the hydrolysis

Card 1/2

ACCESSION NR: AP4019484

is slower and with higher ammonia concentration, the yield of SiO_2 drops rapidly. Time is also an important factor: with 0.826% ammonia, only 25% hydrolysis was achieved in 20 minutes, and 98% in 140 minutes. Ammonia concentration should therefore be no greater than 0.9%. The more rapid hydrolysis with the same concentration of HCl is explained by the fact that it is a stronger electrolyte than ammonia. The presence of hydroxyl ions, and hence the ammonia method, is considered preferable to the presence of hydrogen ions. Orig. art. has: 7 tables.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute); Dneprovskiy titano-magniyey*y zavod (Dneprovsk Titanium-Magnesium Plant)

SUBMITTED: 21Feb63

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: CH, MA

NR REF SOV: 006

OTHER: 003

Card

2/2

VEKROV, V.A.; VITUKHOVSKAYA, B.S.; DORONKINA, R.F.

Changes in solubility of germanium dioxide in water with an
increase in temperature from 0 to 100°C. Izv.vys.ucheb.zav.;
khim.i khim.tekh. 7 no.6:1018-1019 '64.

(MIRA 18:5)

1. Dnepropetrovskiy metallurgicheskiy institut, kafedra obshchey
i neorganicheskoy khimii.

VEKHOV, V.A.; DUDNIK, Ye.P.; MARIN, K.G.

Preparation of silicon dioxide by hydrolysis of tetra-
ethoxysilane. Zhur. neorg. khim. 9 no.3:530-533 Mr '64.
(MIRA 17:3)

1. Dnepropetrovskiy metallurgicheskiy institut i Dneprovskiy
titano-magniyevyy zavod.

VEKHOV, V.A.; ZASHKVARA, S.F.

Fisher's aluminum retort. Khim. i tekhn. topl. i masel 9
no.1:41-42 Ja '64. (MIRA 17:3)

1. Dnepropetrovskiy metallurgicheskiy institut.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

EPSHTEYN, Ye.F.; FILIPPOVA, Ye.S.; VEKHOV, V.A.; GARANZHA, L.P., aspirant

'Makselignin, a new reagent for treatment of clay solutions.
Izv. vys. ucheb. zav., geol. i razv. 6 no.5:156-159 My '65.

(MIRA 18:10)

I. Dnepropetrovskiy gornyy institut.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

ACC NR: AP6003640

SOURCE CODE: UR/0078/65/010/010/2359/2362

AUTHOR: Vekhov, V. A.; Dudnik, Ye. P.; Rumyantseva, Ye. I.

20

ORG: none

B

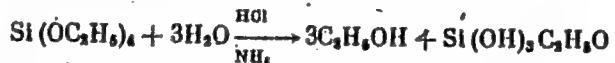
TITLE: Hydrolysis of tetraethoxysilane

4/15

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 10, 1965, 2359--2362

TOPIC TAGS: hydrolysis, silane, hydrochloric acid, ammonia

ABSTRACT: The hydrolysis of tetraethoxysilane was studied at 24 and 50°C in the presence of small amounts of water (tetraethoxysilane : water = 25:1) at HCl concentrations of 2.66 to 1000 mg-mol/l and NH₃ concentrations of 0.182 to 0.82 g-mol/l. The composition of products and the kinetics of hydrolysis were studied by chromatographically determining the alcohol yield in samples withdrawn from the reaction at different times and analyzing the precipitate of the reaction products. The following reaction is given for the hydrolysis:



The reaction does not go to completion in either the acidic or the al-

Card 1/2

UDC: 542.938 : 546.287

Z

ACC NR: AP6003640

kaline medium, and stops at the formation of ethoxysilanol. It is a zero order reaction as indicated by the unchanging value of its rate constant with time. However, the rate constant increases with HCl and NH₃ concentration and with rising temperature. The activation energy of the reaction was calculated to be 6.3 kcal/mol. Orig. art. has: 3 figures, 3 tables, 2 formulas.

SUB CODE: 07/ SUBM DATE: 30Jul64/ ORIG REF: 004/ OTH REF: 000

Card 2/2

VEKHOV, Viktor Aleksandrovich

(Chemistry-Metallurgical Inst of West Siberian branch of the
Acad Sci USSR), Academic degree of Doctor of Technical Sciences,
based on his defense, 18 May 1954, in his dissertation entitled:
"Metallurgical Coke from gaseous coals of the Kuzbass."

Academic degree and/or title: Doctors of Sciences

SO: Decisions of VAK, List no. 4, 25 February 1956, Byulleten'
MVO SSSR, No. 1, January 1957, Moscow, pp. 14-24, Uncl.
JPRS/NY-440

LISIN, D.M.; VYKHOV, V.A.

Coking capacity of Minusinsk Basin, Askiz coals. Trudy Khim.-met.
inst. Zap.-Sib. fil. AN SSSR no.10:71-80 '57. (MIRA 11:6)
(Minusinsk Basin--Coke)

VEKHOV, V.A.; TRAVIN, A.B.; KAZNACHAYEVA, K.T.

Petrographic and physicochemical characteristics of Medzhigey deposit
coals in Tuva Province. Trudy Khim.-met. inst. Zap.-Sib. fil. AN
SSSR no.10:103-111 '57. (MIRA 11:6)
(Tuva Autonomous Province—Coal geology)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

VYKHOV, V.A.

Coking capacity of Kuznetsk Basin, Kemerovo seam coal. Trudy Khim.-
met. inst. Zap.-Sib. fil. AN SSSR no.10:143-154 '57. (MIRA 11:6)
(Kuznetsk Basin--Coke)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

VYKHOV, V.A.; LOSKUTOVA, Ye.N.

Brown coal from the Itat deposit in the Chulysh-Yenisey Basin.
Trudy Khim.-met. inst. Zap.-Sib. fil. AN SSSR no.10:215-219 '57.
(Chulysh-Yenisey Basin—Lignite) (MIRA 11:6)

VEKHOV, V. A.

65-2-12/12

AUTHOR: Vekhov, V. A.

TITLE: Brown Coal of the Kupinsk Region in the Novosibirsk District. (Buryy ugolv Kupinskogo payona Novosibirskoy oblasti).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.2.
pp. 67 - 69 (USSR).

ABSTRACT: A seam of brown coal of about 1.5 m thickness was discovered while carrying out the drilling of wells in the MTS of the Kupinsk Region of Novosibirsk. A sample (height = 150 mm and a diameter of 100 mm) was sent to the Coal Laboratory of the Chemico-Metallurgical Institute (Khimiko-metallurgichesky institut) of the West Siberian Branch of the AN USSR for analysis. Petrographic studies were carried out in the Mineralogical Geological Institute ZSFAN (Gorno-geologiches'yy institut ZSFAN) by A. B. Travin. Results of investigations are given in Table 1. The coal contains 62.70% C, 5.30% H, 0.90% N and 31.0% O. The calorific value is 6217 Cal. It contains 2.54% extracted material and a considerable quantity of humic acid (27.68%). On distilling the sample in an aluminium retort the following yields were obtained: semi-coke 56.85%, tar 7.55% (Table

Card 1/2

65-2-12/12

Brown Coal of the Kupinsk Region in the Novosibirsk District.

2), or calculated on dry coal the yield of semi-coke was 77.30%, and tar 10.27%. Gas and waste constituted 6.20% and pyrogenic water 6.27%. Analysis of the ash of this coal was carried out in the Analytical Laboratory of the Chemico-Metallurgical Institute, and showed that the content of CaO and MgO was higher than is usual in coal ashes. Its composition is given in Table 3. This brown coal has a higher moisture content, low ash content, a high calorific value, and a high yield of tar. There are 3 Tables and 2 Russian References.

ASSOCIATION: West Siberian Branch of the AS USSR. (Zapadno-Sibirskiy filial AN SSSR).

AVAILABLE: Library of Congress.

Card 2/2

VEKHOV, V.A.

Dilatometric determination of the coking capacity of coal. Izv.
vost.fil. AN SSSR no.2:32-59 '57. (MIRA 10:9)

I. Zapovedno-Sibirskiy filial Akademii nauk SSSR.
(Dilatometry) (Coal--Testing)

VEKHOV, V.I.; USPENSKIY, S.M.

Land forms in isolated willow forests in the eastern part of
the Bol'shezemel'skaya Tundra. Nauch.dokl.vys.shkoly; geol.-
geog.nauki no.2:163-171 '59. (MIRA 12:8)

1. Moskovskiy universitet biologo-pochvennyy fakul'tet, kafedra
vysshikh rasteniy.
(Bol'shezemel'skaya Tundra--Willows)

VEKHOV, Nikolay Kuz'mich, prof. [deceased]; VEKHOV, Vladimir
Nikolayevich; NERONOVA, M.D., red.; LELYUKHIN, A.A., tekhn.
red.

[Coniferous species of the Forest-Steppe Station; results
of their introduction] Khvoynye porody Lesostepnoi stantsii;
itogi introduktsii. Moskva, Izd-vo M-va kommun.khoz.RSFSR,
1962. 147 p.

(MIRA 16:4)

(Volynskiy District--Coniferae)

(Volynskiy District--Plant introduction)

Country : USSR
Category: Forestry. Forest Cultures.

K

Abs Jour: RZhBiol , No 12, 1958, No 53483

Author : Vekhov, V.N.

Inst : Moscow Univ.

Title : The Culture of Limber Pine (*Pinus flexilis* James)
Under Forest Steppe Conditions

Orig Pub: Vestn. Mskh. un-ta. Ser. biol , pochvoved , geol..
geogr. 1957, No 3, 87-94

Abstract: This article gives a brief biogeocological characteristic
of *P. flexilis*; it indicates the area of its occurrence,
and gives a botanical description of it. The best cul-
ture of this variety is found at the Lesostepnaya Ex-
perimental Station (Lipetskaya Oblast') where it grows
successfully on the north-western slope on leached

Card : 1/3

Country : USSR
Category: Forestry Forest Cultures.

Abs Jour: RZhBiol , № 12, 1958, № 53483

out chernozem having a base of heavy clayey soil. The plants of *P. flexilis* survived extremely severe winters for 25-30 years, and therefore are completely acclimatized; they are self-seeding. At the age of 28 years, the tree stand reaches an average height of 6.8 m with a diameter of 14.2 cm. Under local conditions, 2 varieties were differentiated by the color of their unique cones: one had green cones, the other had brown-violet cones. The growth in height in the pine begins at the same time as in the Siberian cedar. The growth proceeds slowly for 10 years, and later it accelerates and exceeds the rate of growth of the cedar. The article notes the high degree of tolerance

Card : 2/3

K-28

Country : USSR
Category: Forestry Forest Cultures.

K

Abs Jour: RZhBiol., № 12, 1958, № 53483

of the pine with regard to the insufficient moisture
of the leached cut substrate. The phenophases of the
pine under the conditions of the experimental station
are described. -- L.V. Nesmelov

Card : 3/3

USPENSKIY, S.M.; BEME, R.L.; PRIKLONSKIY, S.G.; VEKHOV, V.N.

Birds of northeastern Yakutia (to be continued). Ornitologija no.4:
64-86 '62. (MIRA 16:4)
(Yakutia—Birds)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

USPENSKIY, S.M.; BEME, R.L.; PRIKLONSKIY, S.G.; VEKHOV, V.N.

Birds of northeastern Yakutia. Ornitologija no.5:49-67 '62.
(MIRA 16:2)
(Yakutia--Birds)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

VEKHOV, V.N.

Growth characteristics of some pine species in forest-steppe regions.
Nauch. dokl. vys. shkoly; biol. nauki no.2:97-101 '58.
(MIRA 11:10)

1. Predstavlena kafedroy vysshikh rasteniy Moskovskogo gosudarstven-
nogo universiteta imeni M.V. Lomonosova.
(Pine) (Growth (Plants))

VVKHOV, V.N.

Behavior of *Pinus pumila* (Pall.) Eng. in forest-steppe regions.
Nauch.dokl.vys.shkoly;biol.nauki no.4:143-146 '58.

(MIRA 11:12)

1. Rekomendovana kafedroy vysshikh rasteniy Moskovskogo
gosudarstvennogo universiteta imeni M.V.Lomonosova.
(Meshcherskoye (Lipetsk Province)--Pine)

Country : USSR
Category : Forestry, Dentrology. K

Abs Jour : RZhBiol., No 6, 1959, No 24706

Author : Vekhov, V. N.
Inst : University of Biological Sciences.
Title : Growth Characteristics of Certain Pine Species under the Conditions of the Forest-and-Steppe.
Orig Pub : Nauchn. doklad. vyssh. shkoly. Biol. no.,
1958, No 2, 27-101

Abstract : During 1951-1952, Pinus silvestris, P. sibirica, P. pumilla, P. peuce, P. strobus, P. ponderosa, P. banksiana, P. murrayana, P. montana, P. pallasiana and P. nigra were investigated in the Forest-and-Steppe Experimental Station (Lipetskaya Oblast). The investigations were carried out in pure plantations on lixiviated chernozem and on podzolized soils of

Card : 1/3

Country : USSR
Category : Forestry. Dendrology. K
Abs Jour : RZhBiol., No 6, 1959, No 24706
Author :
Inst :
Title :
Orig Pub :

Abstract : the northwestern valley slope. It was established that the growth in height starts earlier in northern and alpine species; later, in southern ones. The end of the growth is not connected with temperature, and its rhythm inherent to the species investigated in nature is preserved also in cultivation. In some pines, the maximal daily additional growth at-

Card : 2/3

Country : USSR
Category : Forestry, Dendrology. K
Abs Jour : RZhBiol., No 6, 1959, No 24706
Author :
Inst :
Title :
Orig Pub :
Abstract : tains 3-3.3 cm. The top shoots grow 5-10 days longer than do the side shoots. In individual years, the Lammas shoots attain large sizes and make up in total additional growth more than one-quarter of the tree's height. -- L. V. Nesmelcv

Card : 3/3

19

VEKHOV, V.N.

Growing limber pine (*Pinus flexilis* James) in the forest steppe. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 12 no.3:87-94 '57. (MIEA 10:12)

1. Kafedra vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta.
(Lipetsk Province--Pine)

VEKHOV, V.N.

35974

nekotoryye redkiye rasteniya privolzhsko- dubninskogo
zapovednika. nauch.-metod. zapisk (sovet ministrov
refsr, glav. upr. po sazovednikam), vyp. 12, 1949, S. 116-20

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

VEKHOV, Ye.

~~Students' industrial practice in a combine factory. Politekh.
obuch. no.5:91-93 My '58.~~ (MIRA 11:5)
(Field work (Educational method))

VEKHOVA-SHANDUR'VA, Mariya Ivanovna

Pathological changes autonomous nervous system stomachal-bowel tract of children of early age concerning dysentery.

Dissertation for candidate of a Medical Science Degree.

Chair of Nursery Diseases (Lechfaka) (head prof F.A. Byrojev) and Histology (head prof N.G. Kolosov) Saratov Medical Institute, 1950.

VEKHOVSKY, B. I., MAKAROV, A. M. and BOGACHEV, A. M.

"Measuring Thickness and Density With the Aid of Radioactive Isotopes".

Physics Institute imeni Lebedev, Academy of Sciences USSR

Report appearing in 1st Volume of "Session of The Academy of Sciences USSR on the Peaceful Use of Atomic Energy, 1-5 July 1955", Publishing House of Academy of Sciences USSR, 1955.

SO: Sum 720, 28 Nov 1955.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

negligible change in the form of the document. No changes were suggested for communication.

APPROVED FOR RELEASE: 08/31/2001

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"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

BERSUKER, I.B.; VEKHTER, B.G.

Splitting of infrared absorption and Raman spectrum bands in octahedral complexes of transition metals under the effect of inner asymmetry. Izv. AN Mold. SSR no.10:11-17 '62. (MIRA 17:12)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

REF ID: A67161
SEARCHED SERIALIZED INDEXED
FILED 11-22-94

FC-4 10/13 10/13
TR 0058/65/000/003/D010/D010

SOURCE: Ref. zh. Fizika, Abs. fiz.

AUTHOR: Bersuker, I. B.; Vekhter, B. G.; Titov, Yu. G.

TITLE: Effect of inversion splitting for tetrahedral complexes of transition metals

CITED SOURCE: Izv. AN MoldSSR. Ser. yestestv. i tekhn. n., no. 9, 1963, 1/-21

TOPIC TAGS: inversion splitting, tetrahedral complex, transition metal, electron vibrational level, copper tetrachloride, vanadium tetrachloride

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Card 1/2

L. A. V. M. L.

ACCESSION NR: AR5012224

complexes and to the evaluation of the corresponding estimates. Esti-
mations of the splitting of the ground layers in the

case of type I (less than 10% of the total area) are connected with a large error. For distortions of type II, the layer, the splitting of the ground
large. For VLLA, the obtained interval splitting of the ground
can be significant in the case of large distortions. It can also be significant in the
investigation of the splitting of the ground layers. The investigation of the splitting of the ground layers. The
Pshenichnov.

SUB CODES: IC, MP

ENCL: 00

Card 2/2

BERSUKER, I.B.; VEKHTER, B.G.

Microwave and paramagnetic resonance spectra of octahedral complexes
of transition metals of the d₁ configuration taking inversion
splitting into account. Fiz. tver tela 5 no.9:2432-2440 S '63.
(MIRA 16:10)

1. AN Moldavskoy SSR, Kishinev.

L 12642-6^c EWT(1)/EWT(n)/EWP(j)/EBC(t)/EWP(t)/EWP(b) IJP(c) RM/JD
ACCESSION NR: AP4044925 S/0181/64/006/009/2583/2589

AUTHORS: Bersuker, I. B.; Budnikov, S. S.; Vekhter, B. G.; Chinik, B. I.

TITLE: Hyperfine structure of EPR spectra of complexes of copper
with in solution. Part II

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2583-2587

TOPIC/TABLES: Hyperfine structure, electron paramagnetic resonance,
paramagnetic interaction, quadrupole interaction, splitting, copper

ABSTRACT: The results of an earlier paper by one of the authors
(I. B. Bersuker, ZhETP v. 44, 1239, 1963) are refined to include the
quadrupole interaction and the splitting. This makes it

L 12642-65
ACCESSION NR: AP4044925

trum of Cu²⁺ complexes. The hyperfine interaction includes the dipole-dipole and quadrupole interaction. The results confirm the previously obtained frequency and temperature dependences of the spectrum. There are no similar experimental data for comparison with the present, because the moment of the external static magnetic field was 1000 G, i.e., along the fourfold axes of the magnetite crystal, for which the spectrum has the largest number of characteristic singularities in this direction, whereas the majority of the experimental data on hyperfine structure pertain to a field direction perpendicular to the crystallographic axes, for which the spectrum is relatively simple. At the same time, it is known that the experimental data are available for the hyperfine quadrupole moments, which are in good agreement with the results of the previous publications (see table).

Yuri A. Kiselev, V. M. Kiselev, Kishinev (Institute of Geology and Mineralogy), 1980.

Card 2/3

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5

L 13642-A5
ACCESSION NR: AP4044925

SUBMITTED: 17Feb64

ENCL: 00

OTHER: 008

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859230008-5"

L 52784-65 ENT(1)/EPF(c)/EBC(t) Pi-+ IJP(c) 36/GG
ACCESSION NR: AP5010740

UR/0181/65/007/004/1231/1233

AUTHOR: Bersuker, I. B.; Vekhter, B. G.

TITLE: On the mechanism of spin-lattice relaxation in systems with inversion splitting

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1231-1233

TOPIC TAGS: spin lattice relaxation, electron paramagnetic resonance, line broadening, relaxation time, inversion splitting, transition metal

ABSTRACT: This is a continuation of earlier papers (ZhETF v. 43, 1315, 1962, FTT v. 5, 1963, and others) in which a theory was developed for inversion splitting of ESR signals in various types of transition metals and some of their compounds. The theory was based on the ESR and NMR resonance Raman effect. The results of the investigation were used to clarify the possibility of investigating the main mechanism of the investigation in which it is assumed that temperature is the main mechanism of the investigation of spin-lattice polarization in systems having inversion splittings (these include the case of transition metals in crystals, although

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the results can be extended to include impurity centers and complexes in a non-crystalline surrounding) is due to relaxation transitions in which inversion states participate. The calculations are based on the results of the earlier papers. Expositions are given for the calculation of the rates of the transitions in the extreme cases of very weak and very strong coupling between the spin-lattice system. The differences between the behavior of the ESR-TG series is briefly pointed out. The results are compared with experimental data on the temperature dependence of the EPR line broadening. Orig. art. has: 2 formulas and 1 table.

ASSOCIATION: Institut Khimii AH MSSR, Kishinev (Chemistry Institute, AH MSSR)

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